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# *SafetyBeltSafe U.S.A.*

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June 8, 2000

Ms. Rose McMurray

Associate Administrator for Traffic Safety Programs

National Highway Traffic Safety Administration

400 Seventh Street SW, Room 5125/NTS-01

Washington, DC 20590

Dear Ms. McMurray:

I had the pleasure of sharing lunch with you in San Diego at the California Office of Traffic Safety Summit 2000. We discussed the problems with LATCH about which we are learning. You kindly suggested that you would see that our concerns reached the right ears. I am enclosing the following memo which is a summary of some of the issues that have reached us. We hope that by bringing these points to the attention of the appropriate persons, they will be addressed in an expeditious manner.

Sincerely yours,

Stephanie M. Tombrello, L.C.S.W.

Executive Director

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June 8, 2000

To: National Highway Traffic Safety Administration

From: Stephanie M. Tombrello, LCSW

Executive Director, SafetyBeltSafe U.S.A.

Re: LATCH: Present Reports of Misuse and Implications

It is well known that SafetyBeltSafe U. S.A. noted extremely high rates of misuse by those choosing and installing safety seats a very long time ago. With our ongoing grassroots connections, we are in a position to monitor these matters, both in safety seat checkups which we initiated in the early 1980's, and through our Safe Ride Helpline which serves the nation both through toll-free telephone lines and, for the past 18 months, through our Web site Safety Seat Checkup Online. Therefore, we were very supportive of the development of a system that would reduce installation errors.

The first group of vehicles with the entire LATCH system in place has been introduced, the Cosco Triad is on the market, and Fisher-Price plans to introduce the Safe Embrace II convertible safety seat so equipped as well. However, instead of reports of problem-free installation, we are hearing already of errors and confusion. Although it is not unusual to have some "teething" problems with new systems, it appears that there are some issues which must be addressed quickly before a large number of vehicles and safety seats are on the market.

The number one premise of LATCH is to eliminate the need for large numbers of exhaustively trained child passenger safety technicians and elaborate fitting stations. Parents and caregivers of all educational and reading levels should be able to install safety seats in vehicles without extensive training and consultation. The system should be adequately engineered so that vehicles and safety seats fit together by design. There should not be "booby traps" in the designs that could lead parents/caregivers to make dangerous, even fatal, mistakes. Intuitive design should be the goal of the system.

Some may suggest that warning labels or extensive instructions with diagrams are a possible alternative. It is our opinion that this is not so. It is the belief of many that "bad experiences" will not "happen to us". If one is not inclined to believe that assessment, a look at both outcomes and surveys should prove instructive. For example, in 1996, parents with children under 1 year and vehicles with dual air bags (thus, typically well-educated and affluent since that was not the average vehicle) were asked about their knowledge of the risk of placing rear-facing infants in vehicle front seats covered by a passenger air bag. Although, some did not know of the risk, it was those who clearly stated their awareness of this risk whose follow-up responses are of interest. Of that group, 23% stated that they occasionally placed their babies in the front seat!!

The air bag issue illuminates the propensity to deny risk even further since the Air Bag and Seat Belt Safety Campaign has been offering extensive information nationwide on this subject. First, interviews with parents whose children were killed due to riding in front in air-bag equipped vehicles are revealing. Parents of a two year old who had purchased a used car with a passenger air bag stated that they read the warnings but did not think they applied to their child. A recent case in Texas was a one year old whose vehicle contained three safety seats in back; the child was standing in mother's arms as she drove the vehicle to have the child's holiday photo taken. She stated that she had killed her child--and is described by informants as a good mother who knew well that child restraint use was important.

LATCH is an investment in the future--in being able to require safety seat use without needing to provide extensive education in installation. It is meant to reduce misuse which afflicts at least 95% of the safety seat users. We cannot go on with these levels. Therefore, any LATCH misuse needs to trigger immediate remediation. .

To date, the following issues have been raised:

1. Parents have asked if they can attach a LATCH safety seat in the center position of the vehicle. There is a tether attachment point; however, the bars are meant to be used on the outboard positions only. The response has been that it MIGHT be acceptable to have a safety seat installed in the center position, attached to the in-board bars on either side. However, there is some mention of the width of the safety seat being a factor and that the attachments should not be splayed too far apart, an issue that only pertains to the flexible strap LATCH attachments. [Rigid bars with gripping ends wouldn't lend themselves to this problem.] Our concern is that so long as it is physically possible to use the flexible attachments in this manner, one should assume that some will do it. The question is how serious is this to the integrity of the restraint system? If it is serious, re-design is important; simply warning parents not to do it will not prevent it.
2. In vehicles with three safety belts (i.e. 3 rear seating positions), parents might wish to install 3 safety seats, using the LATCH attachment points. That would lead to double-attachment of safety seats to bars, given the federal requirement of only two sets of bars in vehicles with three

seating positions in back. Again, we are hearing from the car manufacturers that only one safety seat should be attached to a bar. Our opinion is that if it is possible to do this, it will be done. Especially it will be likely since there is a third attachment point at the top, namely the top tether anchor for all three seating positions. Unless there is a real barrier to such attachment, assume that it will be done. If there is true danger, then there must be a re-design.

3. A very experienced safety seat installer reported that after taking 5 minutes to install a safety seat with the LATCH system, he spent 2 hours trying to take it out of the vehicle!! Clearly, such a system has not been preliminarily attempted in a real vehicle before marketing or the bar and/or tether anchor is not accessible when a safety seat is tightly installed.

4. An advocate reported that the Cosco Triad was found to be installed with the flexible attachment webbing designated for rear-facing installation used for forward-facing installation. If that is NOT acceptable, something has to be done to prevent it. For example, Fisher-Price planned the metal bar system on the sides of their Safe Embrace convertible so that a single set of flexible straps would be used, regardless of the direction in which the safety seat was used.

5. A highly experienced advocate reports that the Cosco Triad comes with the tether not installed; to install it, grommets must be removed and replaced. Then, the tightening system on the tether is a set of double slides, very difficult to use for a tight fit. Another advocate who has young children literally gave up on the system in her own vehicle and replaced the seat with another that had a more modern system for tightening the tether strap. Another experienced safety seat installer reported that this system is designed in such a way that it would be impossible to adjust if the vehicle seat were taller than the safety seat and the adjuster rested behind the vehicle seat. Yet another Instructor reported great difficulty in installation due to the adjustment system. In addition, this person found that the lower anchorage adjuster butted up against the piece holding the lower anchorage strap in place. Could this have been the reason another person used the other (wrong) set of anchorage straps?

6. It appears that Ford requires a parent to twist a tether strap for proper installation. This counterintuitive instruction may lead to confusion on the part of parents. Having attempted installation of a tether in the Windstar, I can report that it was very difficult to remove, once attached, despite loosening the lock on the tether map. Indeed, in removing the tether clip of a brand new safety seat, the "dog leash" end was damaged so that the piece that is to snap under the curved part of the hook no longer could be hooked underneath. Moreover, visibility and access were very difficult; one was forced to crawl around on the floor of the vehicle, wedged between the second and third rows of seats.

Here is a note from a highly experienced person who has worked on and for the system, now called LATCH, for 12 years:

“Windstar tether anchor hard to reach and must give tether strap a half turn or hook could pop out during crash (per manufacturer's instructions). Needed to remove last row seat to get to tether for second row.” To expect parents to go through this to move a safety seat from one car to another, as many families must, is highly unlikely. The tether needs to be able to be unhooked easily; if parents have to crawl around on the floor of the vehicle on a regular basis, it is likely that tethers, once again, will be observed in the breach!!

7. An employee of the car manufacturer was assisting me in installing a demonstration safety seat in a Honda Odyssey which has two captain's chairs which can be moved into three different locations. Despite the use of the owner's manual, I discovered that since she was feeling for an attachment point, she attached the tether to the floor depression prepared for the vehicle seat to be moved to a different location instead of to the bar underneath the seat cushion.

8. The following is a note from an engineer who visited a dealership to see a vehicle with the entire LATCH system in place.

“One comment I wanted to make that thoroughly disgusted me is the lack of knowledge the sales people have at these dealerships. I just recently went to a local Ford dealer to see the 2000 Windstar equipped with LATCH and inquired of the sales person where the tether anchorage is in the second row captain's chair (they don't leave the owners manuals in the new vehicles), since that particular anchorage didn't jump out at me. She told me that with the lower bars in the bight, the tether strip is not necessary. Needless to say my co-worker and I gave her a bit of an education. Then on top of that, she brought her sales manager out, and he seemed as though we were a complete waste of his time. I even mentioned to him about CPS training and having checkups to which he informed me that he personally knew all about that subject and needed no further training.” Granted, no entire system should be downgraded because of the behavior of employees of a single dealership. However, this aspect of the system--the combination of non-intuitive LATCH locations and untrained, uninterested employees--will be a real problem for parents/customers.

Prior to the beginning of the mandatory rule for tether anchorages in vehicles, SafetyBeltSafe U.S.A. staff were informed that the anchorages would be certified for use for restraints holding children under 60 lbs. We expressed amazement about this since there are many children over that weight whose physical or emotional challenges require the use of restraints that are tethered. In fact, these systems are the only ones that truly require tether usage for ordinary levels of protection. With ADA requirements in effect, this omission also seemed the basis of potential law suits. We petitioned NHTSA to require a) tether anchorages that could be used for restraints that went to a much higher weight or to require b) dealers to replace common anchorages with strengthened ones for families requiring this. To date, no response has been received. This issue

needs to be addressed. We know that a mandatory component is essential; already we have had many complaints that dealers will not install hardware in their vehicles so that tethers can be used, despite national advertising about the FREE availability of this service.

Since LATCH systems on safety seats and in vehicles are still uncommon, many of us have not yet had clients presenting with these systems. That misuse has already reared its unhappy head is very discouraging. We urge rapid attention to this matter.

Sincerely yours,

Stephanie M. Tombrello. L.C.S.W.  
Executive Director

Attachment #1:

Letter from Lori Jacobs, experienced safety seat advocate; CPS Technician; parent of four.

I should have added to my original post on the subject that when I received and first used my Cosco tether (my seat is pre-9/99) I immediately called Cosco, asked for a supervisor, and told them EXACTLY what I thought of the design. The woman I spoke to seemed interested, she took notes on my comments and said she'd send them to the engineers. I suggest others do the same.

The difficulty of using the double-slide adjustment itself is only part of the problem. Any adjustments made there must be fed through the path of the tether - which goes up over the inside top of the seat (behind the padding), down and through a slot to the back of the seat, over a support, and back inside the seat, then back up the inside top of the seat. Feeding slack through this path, while the seat is tightly installed and pressed into the vehicle seat cushion, is next to impossible. Doing so while the seat is NOT installed is useless, since you can't know exactly how long the tether needs to be until the seat is installed. The whole system drove me nuts.

On the initial installation, I had a great deal of trouble doubling the webbing back through the slide, as directed. I finally had to use a pair of pliers to do it! My first thought was of all the untrained parents, who will give up long before going for pliers, and simply not double it back through. I told Cosco this as well.

Lori Jacobs  
4bairns@gte.net

Attachment #2:

Subj: Fwd: Re: VW Latch  
Date: 04/21/2000 7:52:11 AM PST  
From: Stombrello  
To: MMcgindley

For the LATCH file. SMT

Forwarded Message:

Subj: Re: VW Latch  
Date: 04/19/2000 3:23:19 PM PST  
From: chirata@mpd.net (Charles M. Hirata)  
To: Stombrello@aol.com  
CC: cpslist@wildhack.com (Multiple recipients of list cpslist)

Like all technologies, we need to make these systems "Idiot proof", like double-cut keys so you can't put the key in the wrong way. Perhaps the latch attachments should be designed so that only one attachment will fit on the anchor bar. That should eliminate double-latching. If the anchor points can only handle the stress of one attachment, that may be the better way to go. The LATCH system however, does show a lot of promise although it seems to be a "work in progress".

Something to be brought up at the next CPS conference.

Lt. Chuck Hirata  
Maui Police Dept.  
Traffic Section

Stombrello@aol.com wrote;

- > The point about LATCH was to ELIMINATE the need for technical support for the
- > installation of safety seats.



Attachment #3:

Comment from Stephanie M. Tombrello

Experience At Photo Shoot For Car Manufacturer, June 2000

As an example of the problems of mixed messages involving the LATCH system, I recently participated as a consultant at a video shoot of the LATCH process. The producer, who had been trained by me to use the center seating location for best modeling in previous photo shoots, placed the new Safe Embrace II convertible seat in the center location and “latched” it. Indeed, the seat was tethered. It was only at that point that I realized that the lower anchorages are intended for use in the two outboard positions only. We quickly changed the location for the video. However, the producer, a father himself, expressed great consternation that the center location was not available under this new system of attachment. If an experienced child passenger safety advocate like myself can nearly make this mistake, it is clear that many parents will do so. ~ Stephanie M. Tombrello, L.C.S.W., Executive Director, SafetyBeltSafe U.S.A.